IN THE CLAIMS:

Please AMEND claims 30, 32, 33, 38, and 39 as shown below.

Please ADD claims 46-69 as shown below.

1. (Original) A method for providing resource discovery comprising:

sending a first request message having a first selected scope;

analyzing whether a confirm message is received from a discovered resource within the first selected scope in response to the first request message; and

sending a second request message having a second selected scope when a confirm message is not received from a discovered resource in response to the first request message, the second selected scope being greater than the first selected scope.

2. (Original) The method of claim 1 wherein the analyzing further comprises:

setting a timer in response to the first request message being sent;

detecting whether a confirm message is received before the timer expires; and

terminating the resource discovery procedure when a confirm message is received prior to the expiration of the timer.

3. (Original) The method of claim 2 wherein the detecting further comprises:

determining whether a scope increase is allowed when a confirm message is not received before the expiration of the timer;

terminating the resource discovery procedure when a scope increase is not allowed;

increasing the scope to the second selected scope when a scope increase is allowed; and

resetting the timer.

4. (Original) The method of claim 3 wherein the determining further comprises inspecting fields of a response message and determining whether a scope increase is allowed based upon the response message and policies included therein.

5. (Original) The method of claim 1 wherein the sending further comprises transmitting the request message to a known multicast group.

6. (Original) The method of claim 1 wherein the scope comprises a hop count, the hop count representing a number of nodes in a multicast tree that the request message propagates.

7. (Original) The method of claim 6 further comprising decrementing the hop count at a node in the multicast tree receiving the request message and forwarding the request message to a next node in the multicast tree.

8. (Original) The method of claim 1 wherein the request message further comprises parameters for analyzes by a node receiving the request message.

9. (Original) The method of claim 8 wherein the parameters further comprises hop-by-hop parameters, the hop-by-hop parameters being modified by intermediate nodes during the propagation of the request message in the multicast tree.

10. (Original) The method of claim 8 wherein the parameters further comprise destination parameters, the destination parameters being used by a resource being discovered using the request message to determine whether the resource responds using a confirm or a reject message.

11. (Original) The method of claim 1 further comprising:

receiving the request message at a node in a multicast tree;

decrementing a hop count included in the scope;

modifying hop-by-hop parameters;

determining whether the hop count is equal to zero;

passing the request message down the multicast tree when the hop count is not equal to zero;

examining destination parameters in the request message; and

unicasting a response message in response to the request message.

12. (Original) The method of claim 11 wherein the response message comprises a decision field for indicating whether the response is a confirm message or a reject message, a returned hop count representing a value of the hop count field at the time the request message was received by the node and a returned hop-by-hop parameter field representing a value of hop-by-hop parameters received by the node in the request message after modification by the node.

13. (Original) A method for locating an endpoint for setting up a connection, the method comprising:

sending a first request message having a first selected scope to a known multicast group;

setting a timer responsive to the first request message being sent;

detecting whether a confirm message is received from an endpoint before the timer expires;

terminating endpoint locating when a confirm message is received from an endpoint prior to the expiration of the timer;

determining whether a scope increase is allowed when a confirm message is not received from an endpoint before the expiration of the timer;

terminating endpoint locating when a scope increase is not allowed;

increasing the scope to the second selected scope when a scope increase is allowed;

resetting the timer; and

sending a second request message having the second selected scope when a confirm message is not received from an endpoint in response to the first request message, the second selected scope being greater than the first selected scope.

14. (Original) The method of claim 13 wherein the determining further comprises inspecting fields of a response message and determining whether a scope increase is allowed based upon the response message and policies included therein.

15. (Original) The method of claim 13 wherein the scope comprises a hop count, the hop count representing a number of nodes in a multicast tree that the request message propagates.

16. (Original) The method of claim 15 further comprising decrementing the hop count at a node in the multicast tree receiving the request message and forwarding the request message to a next node in the multicast tree.

17. (Original) The method of claim 13 wherein the request message further comprises parameters for analyzes by a node receiving the request message.

18. (Original) The method of claim 17 wherein the parameters further comprises hop-by-hop parameters, the hop-by-hop parameters being modified by intermediate nodes during the propagation of the request message in the multicast tree.

19. (Original) The method of claim 17 wherein the parameters further comprise destination parameters, the destination parameters being used by an resource being discovered using the request message to determine whether the resource responds using a confirm or a reject message.

20. (Original) The method of claim 13 further comprising:

receiving the request message at a node in a multicast tree;

decrementing a hop count included in the scope;

modifying hop-by-hop parameters;

determining whether the hop count is equal to zero;

passing the request message down the multicast tree when the hop count is not equal to zero;

examining destination parameters in the request message; and

unicasting a response message in response to the request message.

21. (Original) The method of claim 20 wherein the response message comprises a decision field for indicating whether the response is a confirm message or a reject message, a returned hop count representing a value of the hop count field at the time the request message was received by the node and a returned hop-by-hop parameter field representing a value of hop-by-hop parameters received by the node in the request message after modification by the node.

22. (Original) An article of manufacture for providing resource discovery using multicast scope selection, the article of manufacture comprising a computer readable medium having instructions for causing a processor to locate a resource for establishing a connection thereto according to a method, the method comprising:

sending a first request message having a first selected scope;

analyzing whether a confirm message is received from a discovered resource within the first selected scope in response to the first request message; and

sending a second request message having a second selected scope when a confirm message is not received from a discovered resource in response to the first request message, the second selected scope being greater than the first selected scope.

23. (Original) The article of manufacture of claim 22 wherein the analyzing further comprises:

setting a timer in response to the first request message being sent;

detecting whether a confirm message is received before the timer expires; and

terminating the resource discovery procedure when a confirm message is received prior to the expiration of the timer.

24. (Original) The article of manufacture of claim 23 wherein the detecting further comprises:

determining whether a scope increase is allowed when a confirm message is not received before the expiration of the timer;

terminating the resource discovery procedure when a scope increase is not allowed;

increasing the scope to the second selected scope when a scope increase is allowed; and

resetting the timer.

25. (Original) The article of manufacture of claim 24 wherein the determining further comprises inspecting fields of a response message and determining whether a scope increase is allowed based upon the response message and policies included therein.

26. (Original) The article of manufacture of claim 22 wherein the sending further comprises transmitting the request message to a known multicast group.

27. (Original) The article of manufacture of claim 22 wherein the scope comprises a hop count, the hop count representing a number of nodes in a multicast tree that the request message propagates.

28. (Original) The article of manufacture of claim 27 further comprising decrementing the hop count at a node in the multicast tree receiving the request message and forwarding the request message to a next node in the multicast tree.

29. (Original) The article of manufacture of claim 22 wherein the request message further comprises parameters for analyzes by a node receiving the request message.

30. (Currently Amended) The article of manufacture of claim 29 wherein the parameters further comprise[[s]] hop-by-hop parameters, the hop-by-hop parameters being modified by intermediate nodes during the propagation of the request message in the multicast tree.

31. (Original) The article of manufacture of claim 29 wherein the parameters further comprise destination parameters, the destination parameters being used by an resource being discovered using the request message to determine whether the resource responds using a confirm or a reject message.

32. (Currently Amended) The ~~method~~ article of manufacture of claim 22 wherein the method further ~~comprising~~comprises:

receiving the request message at a node in a multicast tree;

decrementing a hop count included in the scope;

modifying hop-by-hop parameters;

determining whether the hop count is equal to zero;

passing the request message down the multicast tree when the hop count is not equal to zero;

examining destination parameters in the request message; and

unicasting a response message in response to the request message.

33. (Currently Amended) The ~~method~~ article of manufacture of claim 32 wherein the response message comprises a decision field for indicating whether the response is a confirm message or a reject message, a returned hop count representing a value of the hop count field at the time the request message was received by the node and

a returned hop-by-hop parameter field representing a value of hop-by-hop parameters received by the node in the request message after modification by the node.

34. (Original) A discoverer, comprising:

a discovery unit; and

an application, operatively coupled to the discovery unit, the application sending a notification to the discovery unit for locating an endpoint application;

wherein the discovery unit sends a first request message having a first selected scope to a multicast group, analyzes whether a desired confirm message is received from an endpoint application in response to the first request message; and sends a second request message having a second selected scope when a desired confirm message is not received from the endpoint application in response to the first request message, the second selected scope being greater than the first selected scope.

35. (Original) The discoverer of claim 34 further comprising a timer for setting a window for receiving the desired confirm message, wherein the discovery unit sets the timer in response to the first request message being sent, detects whether a confirm message is received before the timer expires and terminates the location of an endpoint when a confirm message is received prior to the expiration of the timer.

36. (Original) The discoverer of claim 35 wherein the discovery unit determines whether a scope increase is allowed when a desired confirm message is not received before the expiration of the timer, terminates the location of an endpoint when a scope increase is not allowed, increases the scope to the second selected scope when a scope increase is allowed and resets the timer.

37. (Original) The discoverer of claim 36 wherein the discovery unit determines whether a scope increase is allowed when a confirm message is not received before the expiration of the timer based upon the received response message and policies included therein.

38. (Currently Amended) The discoverer of claim 34 wherein the scope comprises a hop count, and the hop count represents a number of nodes in a multicast tree that the request message propagates.

39. (Currently Amended) The discoverer of claim 34 wherein the request message further comprises parameters for ~~analyzes~~ analysis by a node receiving the request message.

40. (Original) The discoverer of claim 39 wherein the parameters further comprises hop-by-hop parameters, the hop-by-hop parameters being modified by intermediate nodes during the propagation of the request message in the multicast tree.

41. (Original) The discoverer of claim 39 wherein the parameters further comprise destination parameters, the destination parameters being used by an endpoint to determine whether the resource responds using a confirm or a reject message.

42. (Original) The discoverer of claim 34 wherein the application and the discovery unit are co-located.

43. (Original) The discoverer of claim 34 wherein the application and the discovery unit are not co-located.

44. (Original) The discoverer of claim 43 wherein the discovery unit comprises a base transceiver station, a base station controller or a mobile services switching center.

45. (Original) The discoverer of claim 43 wherein the application comprises a mobile terminal.

46. (New) A discoverer, comprising:

a discovery means for providing resource discovery; and

a notification means operatively coupled to the discovery means, for sending a notification to the discovery means for locating an endpoint application;

wherein the discovery means comprises:

means for sending a first request message having a first selected scope to a multicast group;

means for analyzing whether a desired confirm message is received from an endpoint application in response to the first request message; and

means for sending a second request message having a second selected scope when a desired confirm message is not received from the endpoint application in response to the first request message;

wherein the second selected scope is greater than the first selected scope.

47. (New) The discoverer of claim 46 further comprising a timer for setting a window for receiving the desired confirm message, wherein the discovery means further comprises

means for setting the timer in response to the first request message being sent,

means for detecting whether a confirm message is received before the timer expires, and

means for terminating the location of an endpoint when a confirm message is received prior to the expiration of the timer.

48. (New) The discoverer of claim 47 wherein the discovery means further comprises

means for determining whether a scope increase is allowed when a desired confirm message is not received before the expiration of the timer,

means for terminating the location of an endpoint when a scope increase is not allowed,

means for increasing the scope to the second selected scope when a scope increase is allowed, and

means for resetting the timer.

49. (New) The discoverer of claim 48 wherein the discovery means further comprises

means for determining whether a scope increase is allowed when a confirm message is not received before the expiration of the timer based upon the received response message and policies included therein.

50. (New) The discoverer of claim 46 wherein the scope comprises a hop count, and the hop count represents a number of nodes in a multicast tree that the request message propagates.

51. (New) The discoverer of claim 46 wherein the request message further comprises parameters for analysis by a node receiving the request message.

52. (New) The discoverer of claim 51 wherein the parameters further comprises hop-by-hop parameters, the hop-by-hop parameters being modified by intermediate nodes during the propagation of the request message in the multicast tree.

53. (New) The discoverer of claim 51 wherein the parameters further comprise destination parameters, the destination parameters being used by an endpoint to determine whether the resource responds using a confirm or a reject message.

54. (New) The discoverer of claim 46 wherein the notification means and the discovery means are co-located.

55. (New) The discoverer of claim 46 wherein the notification means and the discovery means are not co-located.

56. (New) The discoverer of claim 55 wherein the discovery means comprises a base transceiver station, a base station controller or a mobile services switching center.

57. (New) The discoverer of claim 55 wherein the notification means comprises a mobile terminal.

58. (New) A computer program product encoding a computer program of instructions for causing a processor to locate a resource for establishing a connection thereto according to a method, the method comprising:

sending a first request message having a first selected scope;

analyzing whether a confirm message is received from a discovered resource within the first selected scope in response to the first request message; and

sending a second request message having a second selected scope when a confirm message is not received from a discovered resource in response to the first request message, the second selected scope being greater than the first selected scope.

59. (New) The computer program product of claim 58 wherein the analyzing further comprises:

setting a timer in response to the first request message being sent;

detecting whether a confirm message is received before the timer expires; and

terminating the resource discovery procedure when a confirm message is received prior to the expiration of the timer.

60. (New) The computer program product of claim 59 wherein the detecting further comprises:

determining whether a scope increase is allowed when a confirm message is not received before the expiration of the timer;

terminating the resource discovery procedure when a scope increase is not allowed;

increasing the scope to the second selected scope when a scope increase is allowed; and

resetting the timer.

61. (New) The computer program product of claim 60 wherein the determining further comprises inspecting fields of a response message and determining whether a scope increase is allowed based upon the response message and policies included therein.

62. (New) The computer program product of claim 58 wherein the sending further comprises transmitting the request message to a known multicast group.

63. (New) The computer program product of claim 58 wherein the scope comprises a hop count, the hop count representing a number of nodes in a multicast tree that the request message propagates.

64. (New) The computer program product of claim 63 further comprising decrementing the hop count at a node in the multicast tree receiving the request message and forwarding the request message to a next node in the multicast tree.

65. (New) The computer program product of claim 58 wherein the request message further comprises parameters for analyzes by a node receiving the request message.

66. (New) The computer program product of claim 65 wherein the parameters further comprises hop-by-hop parameters, the hop-by-hop parameters being modified by intermediate nodes during the propagation of the request message in the multicast tree.

67. (New) The computer program product of claim 65 wherein the parameters further comprise destination parameters, the destination parameters being used by an resource being discovered using the request message to determine whether the resource responds using a confirm or a reject message.

68. (New) The computer program product of claim 58 wherein the method further comprises:

receiving the request message at a node in a multicast tree;

decrementing a hop count included in the scope;

modifying hop-by-hop parameters;

determining whether the hop count is equal to zero;

passing the request message down the multicast tree when the hop count is not equal to zero;

examining destination parameters in the request message; and

unicasting a response message in response to the request message.

69. (New) The computer program product of claim 68 wherein the response message comprises a decision field for indicating whether the response is a confirm message or a reject message, a returned hop count representing a value of the hop count field at the time the request message was received by the node and a returned hop-by-hop parameter field representing a value of hop-by-hop parameters received by the node in the request message after modification by the node.